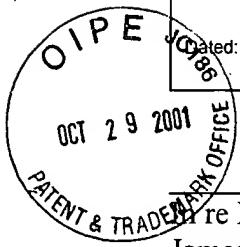


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Dated: October 29, 2001

Signature: Staci Harris  
(Staci Harris)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Patent Application of:  
James M. Musser and V. Kapur

Application No.: 08/160,965

Filed: December 2, 1993

For: VACCINES CONTAINING CYSTEINE  
PROTEASE AND METHODS TO PROTECT  
AGAINST GROUP A STREPTOCOCCI

Atty. Docket: P00965US0

Group Art Unit: 1645

Examiner: J. Hines

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TECH CENTER 1600/2900

AMENDMENT UNDER 37 CFR 1.116

Box RCE  
Commissioner for Patents  
Washington, DC 20231

Dear Sir:

In response to the Office Action dated May 30, 2001, and the Advisory Action mailed October 25, 2001, please amend the above-identified U.S. Patent application as follows:

In the Claims

Please cancel claim 3. Please substitute the below amended claims for claims 1 and 4-6.

1. (Amended four times) A vaccine comprising:

*Sub I A*  
a physiologically acceptable non-toxic vehicle containing a purified non-proteolytic cysteine protease, which confers immunity to a mammal against Group A streptococcal infection, wherein said cysteine protease comprises at least one amino acid substitution and said amino acid substitution occurs at the amino acid position selected from the group consisting of Lys145, Gln185, Cys192, His340, Asn356 and Trp357.

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03 FC:103 630.00 CH  
04 FC:102 756.00 CH  
05 FC:104 280.00 CH  
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